

WHAT IS CLAIMED IS:

1. An image processing method comprising:

a first process for, when a block image consisting of a plurality of pixels is defined as an objective image, calculating a parameter representing whether an effective density pixel having a predetermined density value exists in the objective image;

a second process for, when one of pixels in the objective image is defined as an interest pixel and a pixel neighboring downstream side in a predetermined first direction with respect to the interest pixel is defined as a neighboring pixel, converting the objective image to an update image on lines from which one line is reduced in the first direction, by defining the interest pixel as the effective density pixel when a first condition on which the interest pixel is an effective density pixel and a second condition on which at least one neighboring pixel with respect to the interest pixel is an effective density pixel are satisfied, and by defining the interest pixel as an ineffective density pixel when either the first condition or the second condition is satisfied, as to each interest pixel having at least one neighboring pixel in the objective image;

a third processing for calculating a parameter representing whether an effective density pixel exists in the update image; and

a fourth processing for, when the second and third processes are repeated with respect to the update image defined as the objective image after the third process so that the objective image is lined on one line in the first direction, calculating a number of continuous pixels of the effective density pixels being spatially continuing in the block image on the basis of each parameter calculated in the first and the third processes.

2. The image processing method of claim 1, wherein the number of continuous pixels is calculated in the fourth process by adding each parameter calculated in the first and the third processes.

3. The image processing method of claim 1, wherein the number of continuous pixels is calculated in the fourth process by looking up a table showing relation between each parameter and the number of continuous pixels.

4. The image processing method of claim 1, further comprising:

a fifth process for, when one of pixels in the objective image is defined as an interest pixel and a pixel neighboring downstream side in a second direction different from the first

direction with the interest pixel is defined as a neighboring pixel, converting the objective image to an update image on lines from which one line is reduced in the second direction, by defining the interest pixel as the effective density pixel when a third condition on which the interest pixel is an effective density pixel and a fourth condition on which at least one neighboring pixel with respect to the interest pixel is an effective density pixel are satisfied, and by defining the interest pixel as an ineffective density pixel when either the third condition or the fourth condition is satisfied, as to each interest pixel having at least one neighboring pixel in the objective image;

a sixth process for calculating a parameter representing whether an effective density pixel exists in the update image;

a seventh process for, when the fifth and the sixth processes are repeated with respect to the update image defined as the objective image after the sixth process so that the objective image is lined on one line in the second direction, calculating the number of continuous pixels in the block image on the basis of each parameter calculated in the fifth and the sixth processes; and

an eighth process for comparing the number of continuous pixels calculated in the fourth process with the

number of continuous pixels calculated in the seventh process and calculating the number of continuous pixels having a larger value of them as the number of continuous pixels in the block image.

5. The image processing method of claim 4, wherein the number of continuous pixels is calculated in the seventh process by adding each parameter calculated in the fifth and the sixth processes.

6. The image processing method of claim 4, wherein the number of continuous pixels is calculated in the seventh process by looking up a table showing relation between each parameter and the number of continuous pixels.

7. A program for making the computer run the image processing method of claim 1.

8. A computer-readable recording medium on which the program of claim 7 is recorded.

9. An image processing apparatus comprising:
a parameter calculating section for calculating a predetermined parameter representing whether an effective

density pixel having a predetermined density value exists in an objective image which is a block image consisting of a plurality of pixels;

an image converting section for performing image conversing processing for converting the objective image to an update image on lines from which one line is reduced in the detecting direction, when one of pixels in the objective image is defined as an interest pixel and a pixel neighboring downstream side in a predetermined first direction with respect to the interest pixel is defined as a neighboring pixel, by defining the interest pixel as the effective density pixel when a first condition on which the interest pixel is an effective density pixel and a second condition on which at least one neighboring pixel with respect to the interest pixel is an effective density pixel are satisfied, and by defining the interest pixel as an ineffective density pixel when either the first condition or the second condition is satisfied, as to each interest pixel having at least one neighboring pixel in the objective image, and for repeating the image converting processing until an objective image is lined on one line in the detecting direction after the update image is defined as the objective image again whenever the image converting processing is terminated; and

a continuous-pixel-number calculating section for

calculating the number of continuous pixels which represents the number of effective density pixel being spatially continuing in the block image on the basis of the parameter calculated by the parameter calculating section.

10. An image forming apparatus provided with the image processing apparatus of claim 9.